



# **Modeling & Simulation Standards: Should You Care?**

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# What is Modeling & Simulation?

**Represent  
the Real World:**

- Environments
- People
- Equipment
- Activities
- Processes





# Why Modeling and Simulation?

- **M&S is a key enabler of Transformation**
  - (DoD Transformation Planning Guidance)
- **Too Dangerous...Model it. Simulate it.**
- **Too Expensive...Model it. Simulate it.**
- **Don't Understand it...Model it. Simulate it.**
- **Ubiquitous...**
  - Analysis (Programming Resources, Planning Ops)
  - Acquisition (Systems Engineering, Alternatives)
  - Test & Evaluation (Large Scale Joint Environments)
  - Training & Education (Simulators to Campaigns)



# Why should you care?

**In a word: COMPLEXITY**

Increased warfare and system complexity demands more practice, prototypes, and experimentation—which budgets may not support

**Complexity of operations and systems**

**Limited Resources**

**M&S can bridge the gap by:**

- Supporting **concept** development
- Developing **doctrine**
- Exploring new **organizational** efficiencies

**DOTMLPF areas**



## M&S Standards Strategy: An Analogy to City Planning



**All simulations and  
live interfaces**



### Common Technical Framework

- High Level Architecture
- SEDRIS Environment Standards
- Data Standards

### Common Services

- Environmental databases
- Communication networks
- VV&A policy and procedure
- Help Desks and Education
- Resource repositories
- Supporting software/tools

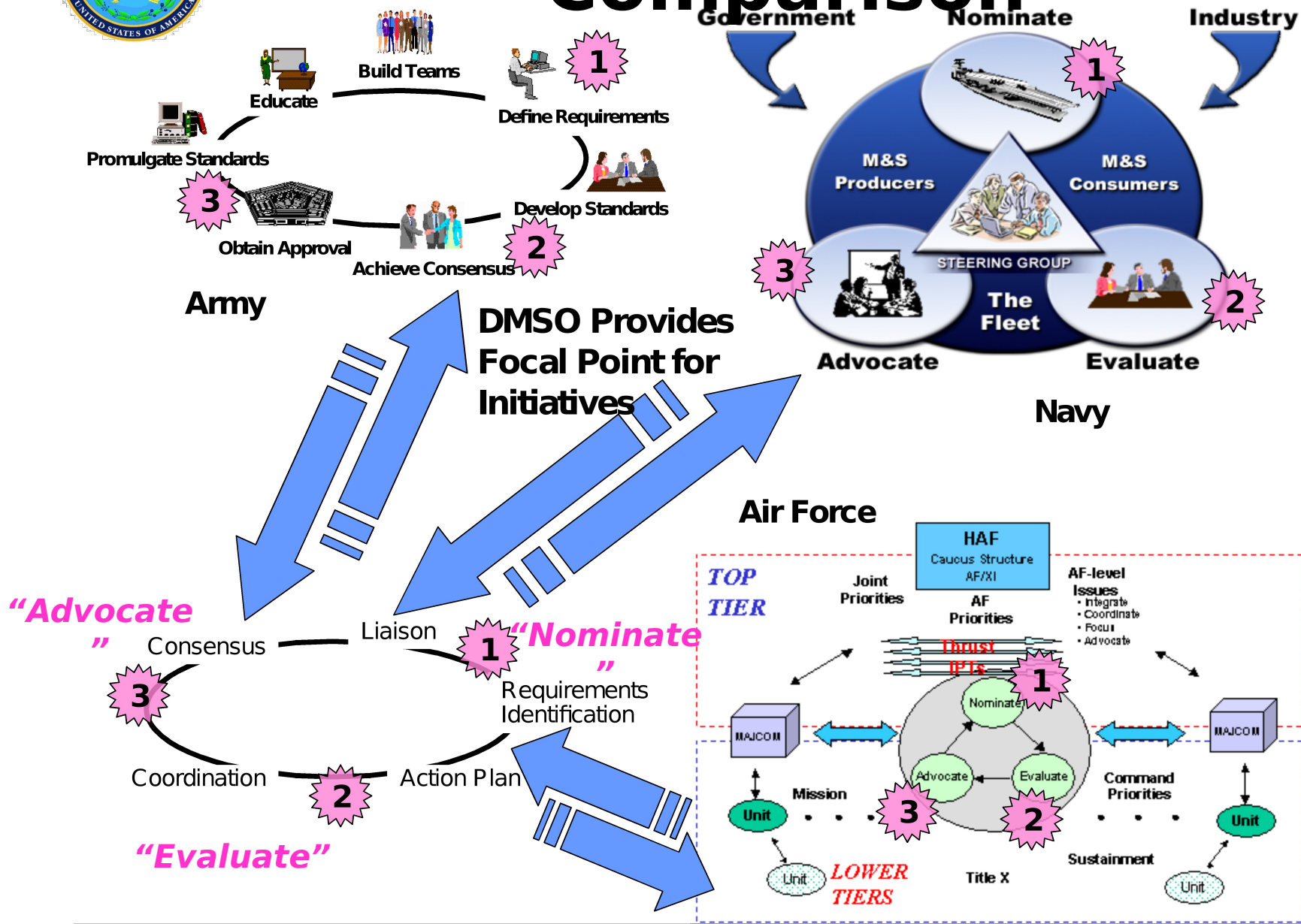


**Payoffs:**  *Interoperability and Re-use*  
 *Capability and Cost-Effectiveness*





# Standards Process Comparison





# Standards for M&S

## ➤ **M&S Specific**

- Simulation Interoperability
- Simulation Interfaces
- Environment Representation
- Verification, Validation & Accreditation

## ➤ **Community-wide Interest**

- C2 Interoperability
- Data Management/Standards
- Metadata
- Communications Protocols
- Web Services